



No1 SINGAPORE OIL

SINO
SERIES



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SINO
The Singapore Oils

ENGINE OIL

S.O X-SUPER STAR XHD HIGH-DUTY GASOLINE AND DIESEL ENGINE OIL

S.O X-SUPER STAR XHD is high performance, high speed, heavy-duty gasoline and diesel engine oil formulated with highly refined mineral base oils and select additives to enhance oxidation stability, protection against wear and corrosion.

S.O X-SUPER STAR XHD is recommended for both heavy-duty gasoline and diesel engines such as passenger cars, heavy duty vehicles, commercial trucks, construction machineries as well as high speed marine diesel engines, burning low sulphur fuels.

BENEFITS

- High thermal and high oxidation stability
- Improved anti-wear property
- Good protection against engine deposits and corrosion
- Promotes engine cleanliness
- Prolongs engine life

API SE/CF
ILSAC GF-4



SAE GRADE	15W/40	20W/50
Kinematic Viscosity, cSt		
@40°C	113	171
@100°C	14.7	18.9
Viscosity Index	134	125
Flash Point (COC), °C	210	220
Pour Point, °C	-25	-25
TBN, mgKOH/gm	16	16

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SAE GRADE	10W	30	40
Kinematic Viscosity, cSt			
@40°C	46	100	141
@100°C	7.3	11.3	14.5
Viscosity Index	105	97	98
Flash Point (COC), °C	210	230	248
Pour Point, °C	-15	-10	-10
TBN, mgKOH/gm	16	16	16

S.O X-SUPER DIESELUBE CI-4 HIGH SPEED SEVERE DUTY DIESEL ENGINE OIL

S.O X-SUPER DIESELUBE CI-4 are super premium quality diesel engine oils formulated for severe duty diesel engines with EGR emission systems including Euro IV engines. The oils possess improved high temperature oxidation stability and corrosion protection, enhanced dispersancy and soot controlling capability under high temperatures.

S.O X-SUPER DIESELUBE CI-4 are recommended for use in high speed four stroke diesel engines with EGR emission treatment systems. It is suitable for all kinds of European diesel engines both on-highway and off-highway, running on high and low sulphur diesels. These oils can also be used for gasoline engines requiring API SL grade oils.

BENEFITS

- Excellent dispersancy and detergency properties
- Outstanding oxidation stability
- Effective control over high temperature piston deposits
- Protect engine against wear, corrosion
- Keep engine clean
- Lower exhaust emission
- Prolong engine life

API CI-4, CH-4, CG-4, CF-4, CF-2, API 2002, 2004, 2005, CAT ECF-1A, MTU TYPE II, VOLVO VDS-2/3, CUMMINS 20071, 76, 78, 20072/77, MANCK E2-HP/HS, ACEA E3/E3/5/5A, ACEA E5/ETAND GLOBAL DHD-1.



SAE GRADE	10W/30	15W/40	20W/50
Kinematic Viscosity, cSt			
@40°C	79	119	165
@100°C	11.7	15.5	18.5
Viscosity Index	140	136	125
Flash Point (COC), °C	210	220	225
Pour Point, °C	-36	-25	-25
TBN, mgKOH/gm	16	16	16

PRODUCT DATA SHEET

ENGINE OIL

S.O MARINE OIL DF-HD MARINE DIESEL ENGINE OILS

S.O MARINE OIL DF-HD are heavy duty lubricating oils for marine diesel engines. The oils possess good acid neutralisation, thermal oxidation stability, anti-wear and anticorrosion properties.

S.O MARINE OIL DF-HD are recommended for crankcase lubrication of all types of trunk piston engines burning low sulphur distillate fuels.

BENEFITS

- Excellent detergency and dispersancy
- Good water shedding property
- Superior oxidation and thermal stability
- Keep engine clean
- Protect engine against wear and corrosion

API CF
ILSAC GF-4



SAE GRADE	30	40
Kinematic Viscosity, cSt		
@40°C	99	141
@100°C	10.9	14.4
Viscosity Index	97	97
Flash Point (COC), °C	240	252
Pour Point, °C	-9	-9
TBN, mgKOH/g	20	20

HYDRAULIC

S.O HYDROIL SS SEMI-SYNTHETIC ANTI-WEAR HYDRAULIC OILS

S.O HYDROIL SS are semi-synthetic hydraulic oils which are formulated with premium low zinc anti-wear additive, possess excellent oxidation stability, anti-wear, anti-corrosion and anti-foam properties.

S.O HYDROIL SS are universal types of oils recommended for use in all types of hydraulic system, especially where high pressure and greater temperature variations encounter. The oils may also be used in moderately loaded gear boxes that do not require an extreme pressure gear lubricants.

BENEFITS

- Outstanding wear, rust and corrosion protection
- Superior oxidation stability
- Excellent thermal and chemical stability
- Excellent filterability
- Good foam resistance
- Assuring long life for hydraulic system components

DIN 51524 PT 2, ISO 11158, SAE AG 100, PARSONS HYDRAULIC OILS, ISO 11158-2, LUBRIL VICKERS H-220-2 & 1-220-43, AGS CINCINNATI PHS 9250-PRO, ASTA 196/68, WIA, AMS/AGMA 9006-E02-80, BSF 126, 127, BOSCH REXROTH R3 90220 AND 908 151222



SAE GRADE	32	46	68	100
Kinematic Viscosity, cSt				
@40°C	30	46	68	98
@100°C	5.5	7.1	8.8	11.4
Viscosity Index	118	113	106	103
Flash Point (COC), °C	220	225	230	240
Pour Point, °C	-15	-12	-12	-12

GEAR OIL

S.O GEAR OIL EP FS FULLY-SYNTHETIC GEAR OIL

S.O GEAR OIL EP FS is a fully synthetic extreme pressure industrial gear oil containing anti-oxidation, anti-corrosion, anti-wear and anti-foam inhibitors. The oil formulated with PAOs possesses excellent high and low temperature properties.

S.O GEAR OIL EP FS is recommended for lubrication of all types of industrial gears both enclosed and open under extreme conditions. Also suitable for system containing worm gears, bearings, sliding parts, operating at high temperature or heavy loads.

BENEFITS

- Excellent high temperature thermal and oxidation stability
- Good anti-rust and anti-corrosion properties
- Outstanding protection against wear and shock
- Superior load-carrying capability
- Longer service life

USF 224, USF 221, USF 220, AGMA 9005-99A, AGMA 250.04



ISO GRADE	220	320	680
Kinematic Viscosity, cSt			
@40°C	220	302	680
@100°C	25.6	34	65
Viscosity Index	150	156	162
Flash Point (COC), °C	247	250	260
Pour Point, °C	-45	-42	-30

OTHERS SINO SERIES

Gasoline Engine Oils
Diesel Engine Oils
Gas Engine Oils
Railways Oils
Gear Oils
Automatic Transmission Fluid
Brake Fluid
Anti-Freeze
Marine Engine Oils
Marine Outboard Engine Oils
Stem Tube Oils
Wire Rope Oils
Chain Oils
Circulating Oils
Compressor Oils
Flushing Oils
Gear Oils
Hydraulic Oils
Machinery Oils
Mould Oils
Paper Machine Oils

Steam Cylinder Oils
Textile Oils
Turbine Oils
Neat Cutting Oils
Soluble Cutting Oils
Stamping & Forming Oils
Heat Transfer Oils
Pneumatic Oils
Quenching Oils
Refrigration Oils
Rubber Process Oils
Rust Preventive Fluid
Transformer Oils
Vacuum Pump Oils
White Oils
Sideway Oils
Grease

API BASE OIL CATEGORIES

Base Oil Categories	Sulfur (%)		Saturates (%)	Viscosity Index
Group I (solvent refined)	>0.03	and/or	<90	80 to 120
Group II (hydrotreated)	<0.03	and	>90	80 to 120
Group III (hydrocracked	<0.03	and	>90	>120

